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1 **VARIABLE TEMPERATURE SEAT CLIMATE CONTROL SYSTEM****Abstract:**

5 A temperature climate control system comprises a
variable temperature seat, at least one heat pump, at
least one heat pump temperature sensor, and a controller.
Each heat pump comprises a number of Peltier
thermoelectric modules for temperature conditioning the
air in a main heat exchanger and a main exchanger fan for
10 passing the conditioned air from the main exchanger to the
variable temperature seat. The Peltier modules and each
main fan may be manually adjusted via a temperature switch
and a fan switch, respectively. Additionally, the
temperature climate control system may comprise a number
15 of additional temperature sensors to monitor the
temperature of the ambient air surrounding the occupant as
well as the temperature of the conditioned air directed to
the occupant. The controller is configured to
automatically regulate the operation of the Peltier
modules and/or each main fan according to a temperature
20 climate control algorithm designed both to maximize
occupant comfort during normal operation, and minimize
possible equipment damage, occupant discomfort, or
occupant injury in the event of a heat pump malfunction.

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